

Patent Claims

1. An electrical connecting apparatus having the  
5 following features:
  - a) a current or data transmitter device which can  
be connected to at least one current-  
transmitting or pulse-transmitting source, is  
arranged in a transmitter housing and has  
10 contact elements,
  - b) a current-receiving or data-receiving device  
which can be electrically connected to a load  
or consumer, is arranged in a receiver housing  
and has contact elements,
  - c) at least the contact elements of one of the two  
devices are arranged in an at least partially  
elastic wall of the associated housing,
  - d) current, pulses or data can be transferred  
between the contact elements, which are in the  
20 form of flat contacts with touching surfaces,  
of the current or data transmitter device and  
the current-receiving or data-receiving device  
by connecting the current or data transmitter  
device to the current-receiving or data-  
receiving device,  
25 characterized in that
  - e) a multiplicity of contact elements (3) of at  
least one of the two devices (1, 5) are held  
next to one another in a holding body (11),
  - f) the contact elements (3) which are held in the  
holding body (11) are elastically mounted, and
  - 30 g) the contact elements (3) which are held in the  
holding body (11) rest on a pressing link (16)  
on the side facing away from the contact  
elements (9) of the other device (5).
2. The electrical connecting apparatus as claimed in  
claim 1,

characterized in that  
the pressing link (16) is elastic.

3. The electrical connecting apparatus as claimed in  
5 claim 1,  
characterized in that  
an elastic sealing element (13) is arranged, at  
least in partial regions, between the contact  
elements (3) and the holding body (11).

10 4. The electrical connecting apparatus as claimed in  
claim 3,  
characterized in that  
the sealing element (13) is introduced into the  
15 holding body (11) by means of molding.

5. The electrical connecting apparatus as claimed in  
claim 3,  
characterized in that  
the sealing element (13) is introduced into the  
holding body (11) by means of injection-molding.

20 6. The electrical connecting apparatus as claimed in  
one of claims 1 to 5,  
characterized in that  
the holding body (11) is in the form of a plastic  
part in which a multiplicity of holding slots (10)  
for the contact elements (3) are made.

30 7. The electrical connecting apparatus as claimed in  
claim 6,  
characterized in that  
the contact elements (3) are arranged in the  
holding slots (10) with lateral play.

35 8. The electrical connecting apparatus as claimed in  
one of claims 1 to 7,  
characterized in that

the pressing body (16) is provided, on the side facing the contact elements (3), with cutouts, grooves, channels or slots (19) which are made in the pressing body (16) between the contact elements (3) which are arranged at a distance from one another.

- 5        14. The electrical connecting apparatus as claimed in one of claims 1 to 13,  
10        characterized in that  
            the pressing body (16) is provided with cutouts, grooves, channels or slots (19') on the rear side facing away from the contact elements (3).
- 15       15. The electrical connecting apparatus as claimed in one of claims 1 to 14,  
            characterized in that  
            part of the housing (1a), on which the pressing body (16) rests, has been provided with cutouts, grooves, channels or slots (19'').  
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16. The electrical connecting apparatus as claimed in one of claims 1 to 15,  
            characterized in that  
25       the pressing body (16) is in the form of a silicone pressure pad.
17. The electrical connecting apparatus as claimed in one of claims 4 to 16,  
30       characterized in that  
            the holding slots (10) are provided with stops (12) on the side facing the contact elements (9) of the other device (5).